

**ABSTRACT OF THE DISCLOSURE**

Provided are a failure analysis method with which it is able to prevent incorrect recognition of fail shapes and to recognize and classify fail shapes at high accuracy, and a recording medium for recording its program, as well as a method of deriving compression thresholds used in the failure analysis method, and a recording medium for recording its program. Specifically, a recognition rule is read (ST1), and a plurality of compressed FBMs, i.e., fail bit maps, are prepared (ST2). After selecting an inferior recognition object (ST3), a predetermined region is selected based on the setting of a fail size (ST4), and the fail rate in the predetermined region is calculated (ST5). Subsequently, under the fail rate condition and the condition as to whether an inferior recognition object is adjacent or not, the inferior recognition object is estimated (ST6), and the fail rates of the remaining compressed FBMs are calculated and normalized (ST7). The fail shape is distinguished by collating the fail rates of their respective compressed FBMs to the fail shape judgement rule.